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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,277

05/11/2006

Hiroyuki Koyama

YH0023-US1

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EXAMINER

LEE, KYUNG S

ART UNIT

PAPER NUMBER

2833

MAIL DATE

DELIVERY MODE

03/30/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,277	<b>Applicant(s)</b> KOYAMA, HIROYUKI	
	<b>Examiner</b> Kyung Lee	<b>Art Unit</b> 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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## DETAILED ACTION

### *Election/Restrictions*

1. Claims 2 and 14-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method claims, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/12/2010.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tani JP10-270217 [applicant submitted] in view of Matsuda JP06-163203 [applicant submitted].
4. Tani teaches a conductive member 10 being a PTC thermistor [fig. 3], and two electrodes 32 and 33 bonded to the conductive member 10. Tani teaches the claimed invention except for the bonding via an adhesive which possesses conductivity and deteriorates in an overheated state and irreversibly increases the electrical resistance. Matsuda teaches an adhesive composed of composite resin and conductive powder that functions as a switching mechanism by functions of changing conductivity corresponding to a thermal change.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the conductive adhesive taught by Matsuda as the bonding adhesive to connect the terminals to the PTC device of Tani, since the conductive adhesive of Matsuda functions as a switching mechanism that gradual changes the resistivity of the total circuit protection device.

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Regarding claims 4-5, Tani in view Matsuda discloses the claimed invention except for bonding the electrodes by either a weld or by solder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used any known methods to attached or connect the electrodes to a PTC body, since the examiner takes Official Notice of the equivalence of using an adhesive or welding for their use for attaching and selection of any one of these known would be within the level of ordinary skill in the art.

Regarding claims 6-7, Tani in view Matsuda discloses the claimed invention except for PTC comprising of either a conductive polymer or a ceramic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used any known material for forming a PTC body and since using any known material and selection of any one of these known to manufacture a PTC body would be within the level of ordinary skill in the art.

Regarding claims 8-11, Matsuda teaches a thermoplastic resin, such as vinyl resin [English abstract] and thermosetting resin, such as phenol resin. Regarding claims 12-13, Matsuda teaches silver and nickel conductive powder.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Lee whose telephone number is (571)272-1994. The examiner can normally be reached on Mon to Thur from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571)272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyung Lee/  
Primary Examiner, Art Unit 2833